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|-------------------------------|-----------------|-----------------|--|
| <b>Notice of Allowability</b> | Application No. | Applicant(s)    |  |
|                               | 09/676,681      | MCMILLAN ET AL. |  |
|                               | Examiner        | Art Unit        |  |
|                               | Ted T. Vo       | 2122            |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--  
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/9/24.
2. ☒ The allowed claim(s) is/are 1-21.
3. ☒ The drawings filed on 14 July 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

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|---|--|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____</li> <li>7. <input type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____</li> </ol> |
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**ANTONY NGUYEN-BA**  
**PRIMARY EXAMINER**

1. The amendment filed on 8/13/04 has been considered.

The amendment to independent Claims 1, 11 and 15, and the arguments given in Remarks section (pages 10-15) have been fully considered and overcome the rejections that were previously applied to the closest arts of record, Logan III (US Pat. No. 6,243,857).

#### **Reasons for Allowance**

2. Claims 1-21 are allowed.

Prior art of record, Logan III, discloses a flowchart mechanism (Machine control system that includes multi-block flowchart) that interacts between a flowchart editor and a connected machine/device. The flowchart mechanism allows code to be generated by using flowchart elements. Users edit the flowchart and generate whatever code for a process that operates and controls the device (figure 6A). Decision blocks are parts of the flowchart causing the execution of two different operational statuses of the device.

However, as pointed out by Applicants, in regard to the newly amended limitation of independent Claims 1, 11, and 15, "*automatically detect relative frequencies at which said first and second operational statuses occur during a time period*", that Logan III does not monitor a relative frequency at which a particularly flowchart block is executed (Remarks: page 11, second paragraph). As further pointed out by Applicants in regard to the Logan III's flowchart, that the errors identified in the machine control system are the errors that the debugger detects in the flowchart code, not used to automatically detect relative frequencies at which said first and second operational statuses occur during a time period (Remarks: page 11, third paragraph).

Therefore, the following is an examiner's statement of reasons for allowance:

The cited prior arts taken alone or in combination fail to teach the claimed invention comprising at least features:

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*a reason code module associated with said flowcharting modules that assigns the first and second reason codes to said first and second flowchart blocks to automatically detect relative frequencies at which said first and second operational statuses occur during a time period",*

as recited in independent Claim 1, and in such manners in independent Claims 11 and 15.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted T. Vo whose telephone number is (703) 308-9049. The examiner can normally be reached on 8:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (703) 305-4552. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

After October 28, 2004, examiner can be reached at new telephone number (571) 272-3706 and the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3694.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTV  
Patent Examiner  
Art Unit 2122  
October 14, 2004



ANTONY NGUYEN-BA  
PRIMARY EXAMINER